

S
622.33
L3RMOC
1977
1

STATE OF MONTANA

2

DEPARTMENT OF STATE LANDS

STATE CAPITOL

HELENA 59601

JAN 6 '77

(406) 449-2074

STATE DOCUMENTS

January 5, 1977

Attached is a Preliminary Environmental Review (P.E.R.) for the proposed amendment of Open Cut Contract #00232 held by Western Energy Company of Butte and Colstrip, Montana. This proposed amendment would add another scoria pit to the eight already covered by this contract. Scoria is used to surface roads in the Rosebud coal strip mine. Contents of this P.E.R. are those required by the Montana Environmental Policy Act (Chapter 65, Title 69, R.C.M. 1947) and the Department's rules adopted pursuant to it (Title 26, Chapter 2, Subchapter 8 of M.A.C.).

All materials submitted to the Department by Western Energy Company as part of their application for this amendment pursuant to the requirements of the Open Cut Mining Act (Title 50, Chapter 15, R.C.M. 1947) are on file and available for public review in the Department's offices.

This review indicates that the issuance of the permit to Western Energy Company does not constitute any action which might significantly affect the quality of the human environment and therefore a draft environmental impact statement will not be issued by the Department. This document is being circulated for public information purposes only.

Sincerely,

JoAnn E. Vorozilchak
JoAnn E. Vorozilchak
Assistant Environmental Coordinator

JAEV/11w

STATE PUBLICATIONS COLLECTION

NOV 02 2007

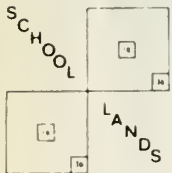
MONTANA STATE LIBRARY
HELENA, MONTANA 59601

U.S. DOCUMENTS COLLECTION
GOVT. DEPOSITORY LIBRARY

NOV 02 2007

342
MONTANA STATE LIBRARY
PLEASE RETURN

Leo Berry, Jr.
XXXXXXXXXX
COMMISSIONER



RESOURCE

FOR THE
PRESENT

OPPORTUNITY

FOR THE
FUTURE



PRELIMINARY ENVIRONMENTAL REVIEW

for a

Proposed Amendment to
Western Energy Company's
Open Cut Contract #00232
Rosebud Mine

Rosebud County, Montana

Montana Department of State Lands
Helena, Montana
January 5, 1977

Submitted pursuant to
Montana Environmental Policy Act
Section 69-6504(b)(3)

PRELIMINARY ENVIRONMENTAL REVIEW

for:

Proposed Amendment to

Western Energy Company's

Open Cut Contract #0033

Rosebud Mine

Rosebud County, Montana

Montana Department of State Lands
Energy Division
Helena, Montana 59601

Submitted pursuant to
Montana Environmental Policy Act
Section 89-604(b)(3)

TABLE OF CONTENTS

	<u>page</u>
I. INTRODUCTION	1
II. LOCATION	1
III. LEGAL CONCERNS	1
IV. MINING PLAN	3
V. HISTORY OF THE ROSEBUD COAL MINE AND ASSOCIATED SCORIA DISTURBANCES	4
VI. IMPACTS ON PHYSICAL ENVIRONMENT	
A. Topography	6
B. Geology and Soils	6
C. Climate and Air Quality	6
D. Water Quality and Quantity	7
E. Aesthetics	8
VII. IMPACTS ON BIOLOGICAL ENVIRONMENT	
A. Terrestrial and Aquatic Life	8
B. Vegetation	8
VIII. IMPACTS ON HUMAN ENVIRONMENT	
A. Employment	10
B. Social and Cultural	10
C. Demands on Environmental Resources of Land, Air, Water and Energy	10
D. Archaeological and Historical	11
E. Transportation	11
IX. REFERENCES CITED	11
X. DEPARTMENT OF STATE LANDS PERSONNEL INVOLVED IN WRITING THIS P.E.R.	12
APPENDIX	13
Brace Hayden's letter (DSL)	14
Michael Grende's letter (WECO)	16
Dee C. Taylor's letter	19

TABLE OF FIGURES

Figure 1. Area B Rosebud Mine Permit Map	2
Figure 2. Scoria Pit Location Map	5
Figure 3. Vegetation Map	9

I. INTRODUCTION

On September 20, 1976, Western Energy Company (WECO) submitted an application to the Department of State Lands (DSL) to amend their Open Cut Contract #00232. WECO wishes to open a scoria pit on land owned by Burlington Northern Railroad. The proposed scoria pit is to be used to surface roads in the recently permitted Area B expansion of the Rosebud Coal Mine. Specifically, WECO proposes to permit 107 acres: 16 acres to be used as roads, 16 acres for actual mining, and 75 acres for "associated disturbance" (see figure 1).

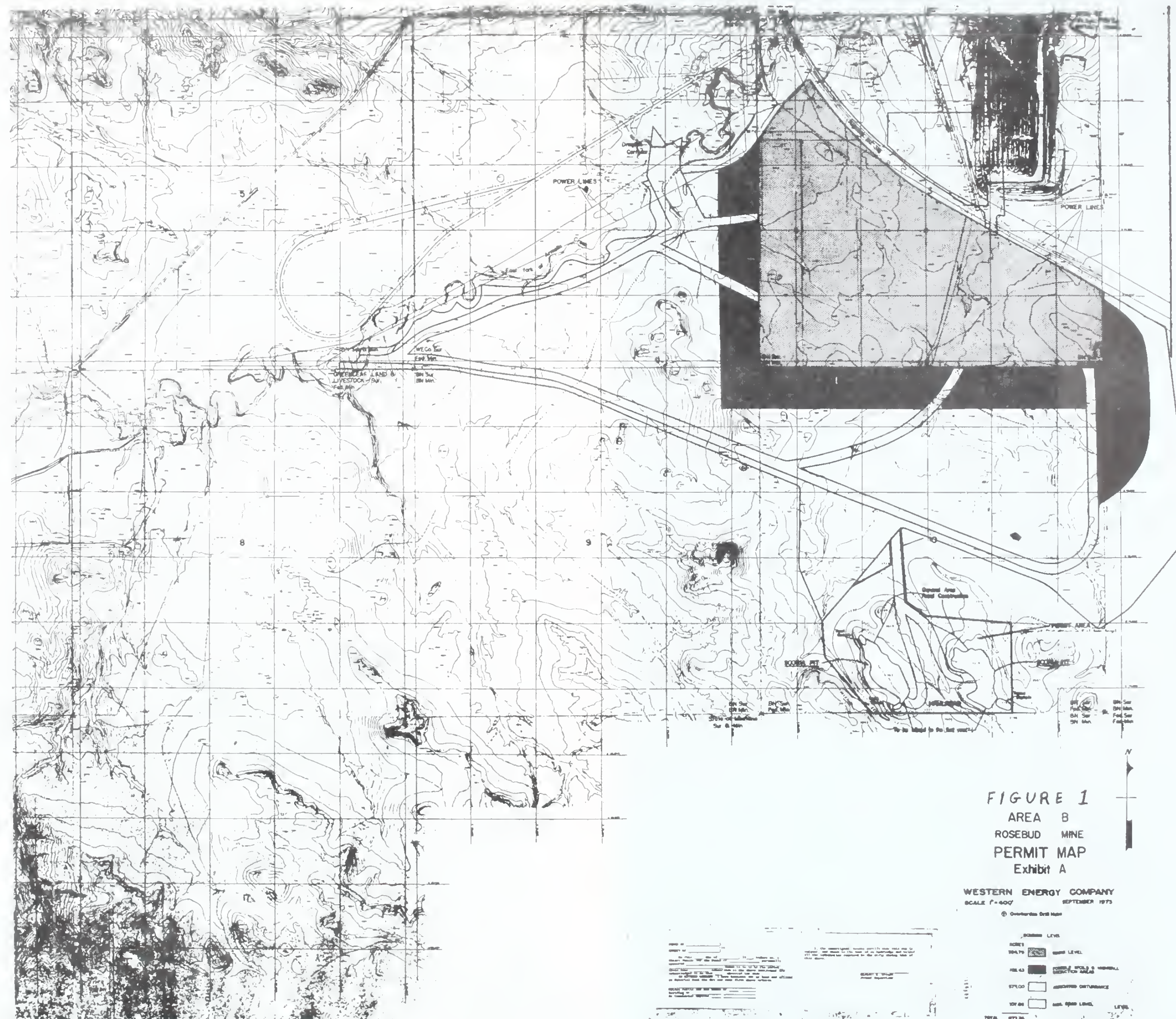
II. LOCATION

WECO's proposed scoria pit is located in the SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$ of Section 10, T1N, R41E, M.P.M., Rosebud County, Montana. The community of Colstrip is located approximately two miles north of the proposed scoria pit area (see figure 1).

III. LEGAL CONCERNS

The Montana Open Cut Mining Act (Section 50-1501 to 50-1516 R.C.M. 1947) applies to any mine operator intending to remove by surface mining 10,000 or more cubic yards of bentonite, clay, scoria, phosphate rock, sand, or gravel. The law requires mine operators to enter into a contract with the state providing for the reclamation of mined land. A bond of \$200 to \$1000 per acre must be filed with the Department of State Lands (DSL). DSL has also implemented rules pursuant to the Open Cut Mining Act.

DSL rules implementing the Montana Environmental Policy Act (MEPA) require that Preliminary Environmental Reviews (PER) be prepared on proposals for projects, programs, legislation and other major actions of state government to determine





Digitized by the Internet Archive
in 2014

<https://archive.org/details/preliminaryenvir1977mont>

whether they would significantly affect the quality of human environments. If such a "significant action" is determined, a draft Environmental Impact Statement (EIS) must be prepared.

IV. MINING PLAN

WECO's Amendment to Contract No. 00232 states:

The proposed scoria pit would be located on top of two bluffs at the south edge of Area B of WECO's Rosebud Mine. A Soil Survey for this area indicates that the mining would occur in Red Rock Outcrop Complex¹; with characteristics of being steep with no salvageable topsoil.

WECO's Amendment to Contract Open Cut No. 00232 states:

....The proposed scoria removal will be preceded by saving all available topsoil. The topsoil that exists on the area of initial mining and road construction will be stockpiled on the location shown on the map. As the area is depleted of scoria the topsoil from the next area to be mined will be replaced over the mined area and seeded in accordance with the reclamation plan approved under Contract No. 00232. This procedure will continue until the last area is mined at which time the topsoil from the stockpile will then be used to reclaim the final mined area and the road. The topsoil stockpiles will be seeded with the grasses included in the seeding mixture stated in the reclamation plan.

....WECO will try to limit all road construction to the area indicated on the map. The final reclamation regrading of the roads will consist of returning the land form to as near the prior grade as possible. All road construction will be kept out of the drainage bottoms except where the roads cross the bottoms. Scoria will be placed in the bottoms in order to minimize any erosion by periodic surface runoff. The only time surface runoff occurs in these areas is during periods of excessive rain or quick snow melt.

Mining will utilize scrapers assisted by a bulldozer or front-end loader to remove, transport, and deposit the scoria. Mining would commence upon permit issuance and would continue during the period of mining in Area B or until such time that the subject area is depleted of scoria.

WECO wishes to permit 75 acres of "associated disturbance" for the purposes of "blocking in" the scoria pit area thus helping prevent accidental disturbance of unpermitted lands by (1) mine operators and (2) stray rocks which roll off of the butte.

V. HISTORY OF THE ROSEBUD COAL MINE AND ASSOCIATED SCORIA DISTURBANCES

A history of the Rosebud Coal Mine is outlined in DSL's Final EIS for the proposed expansion of WECO's Rosebud Mine into Area B (July, 1976). The description included therein is hereby adopted by reference.

WECO has received 11 coal mining permits or permit amendments since the company came under the jurisdiction of the Montana Strip and Underground Mine Reclamation Act; one additional permit application is pending. Currently WECO is mining in Areas A, B and E (figure 2). The Pit 6 area has been totally mined and is now in the process of being reclaimed (figure 2). Estimated coal production for the entire Rosebud Mine is as follows:

<u>Year</u>	<u>Tons</u>
1976 ^{1/}	9,500,000
1977 ^{2/}	8,460,000
1978 ^{2/}	9,660,000
1979 ^{2/}	11,070,000

Since the passage of the Montana Open Cut Mining Act in 1973, WECO has received a permit for 8 separate scoria pits in the vicinity of their Rosebud Mine (figure 2). In addition WECO has also permitted one additional scoria pit under the Montana Strip and Underground Mine Reclamation Act (figure 2). Total acreage permitted for scoria mining now totals approximately 271 acres of which about 77 acres are bonded. Five of the scoria pits currently permitted (containing 173 acres) have never been mined.

^{1/}Montana Department of State Lands estimate.

^{2/}Personal Communication with Alan Davis, Montana Department of Revenue.

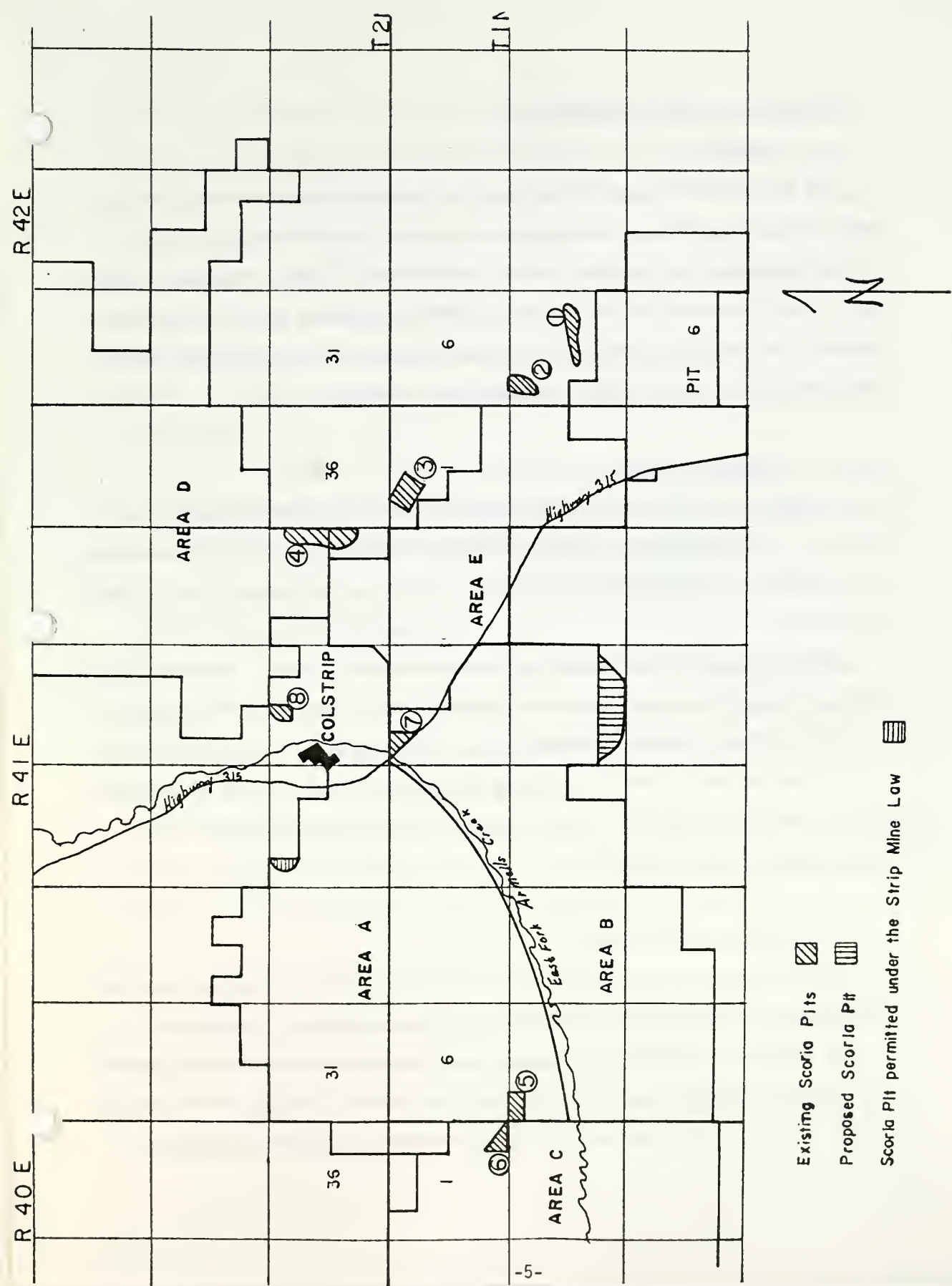


FIGURE 2

VI. IMPACTS ON PHYSICAL ENVIRONMENT

A. Topography

The area of WECO's proposed scoria pit is two knobs with elevations varying from 3,614 to 3,631 feet. They are part of a ridge system forming a natural division between WECO's Rosebud Mine and Peabody's Big Sky Mine immediately to the south. Each knob would be leveled to the 3,600 feet contour after the scoria is removed; thus leaving an artificial flattened appearance. Similarly the scars of haul road would be visible after revegetation has occurred.

B. Geology and soils

Sandstone buttes in this area are remanents which have been protected from erosion by their scoria caps. These sandstone buttes form areas of high overburden which cannot be economically mined for coal at this time and probably not in the near future.

Mining would occur in the Red Rock Outcrop Complex (scoria). Red Rock Outcrop Complex is identified as having no soil suitable for stockpiling. This complex soil type is often favored by ponderosa pine. Experiments in recreating the Red Rock Outcrop Complex in the Colstrip area have been, to date, totally unsuccessful. WECO's proposed haul road would cross land with 0-4' of suitable topsoil. Such topsoil would be stockpiled.^{3/}

C. Climate and air quality

The climate and air quality of the Rosebud Mine (Colstrip) area are described in DSL's Final EIS for Area B (DSL 1976) and is hereby adopted by reference.

Air quality in the Colstrip area has been the subject of considerable sampling and discussion (Montana DSL, 1976, U.S. EPA 1976, Montana D.N.R.C., 1974). Coal mining activities, coal load out facilities, unpaved city and rural roads and

industrial construction activity are principal sources of fugitive dust. Particulate data collected by the Montana Power Company in the town of Colstrip indicates the ambient air particulate level is in excess of the Federal Primary Ambient Air Quality Standard (personal communication from Montana Department of Health and Environmental Sciences, May, 1976). Colstrip electric generating plants 1 and 2, are adding gaseous pollutants to the air, even with preventative control devices (oxides of sulfur and nitrogen, fluoride compounds, etc.). Diesel equipment adds carbon monoxide, carbon dioxide, nitrous oxides and water vapor to the atmosphere.

Colstrip air quality is already considerably degraded as a result of mining and associated industrial activity. If the proposed scoria pit is opened, another source of fugitive dust would be added to the existing situation.

D. Water quality and quantity

Ephemeral streams, tributaries of the East Fork Armells Creek, drain the proposed scoria pit area. They cut through Area B and would be interrupted by coal strip mining. A discussion of the reestablishment of these drainages is included in DSL's Final EIS for Area B (1976).

Without adequate records, it is impossible to establish accurate flow frequencies because the hydrology of ephemeral streams is so variable. There are no perennial surface waters in the immediate area of the proposed scoria pit.

E. Aesthetics

Presently the proposed scoria area is part of a picturesque divide between WECO property and Peabody Coal Company property. Decapitating the bluffs and destroying the ponderosa pine - grassland vegetative community would degrade the visual beauty of the area.

VII. IMPACTS ON BIOLOGICAL ENVIRONMENT

A. Terrestrial and aquatic life^{5/}

Mule deer (Odocoileus hemionus) are noted for their currently high population numbers in the Colstrip area. The proposed area appears to be of "limited value" to mule deer during the winter and spring months. The use of the words "limited value" is based upon the relatively low density of deer as compared to other areas in the vicinity. However, disturbance or destruction of this area would cause the animals to utilize new areas which may or may not be able to accommodate increased pressure.

Important forage species, (shrubs and forbs) exist in the proposed pit area; ponderosa pine constitutes escape cover.

Disturbance may impact mule deer migration routes and spring use of the proposed pit area indicates a possible mule deer fawning ground.

White-tailed deer (Odocoileus virginianus) and antelope (Antilocapra americana) distribution maps indicate very little use of the proposed pit area. Impact upon these animals would be minimal.

There is no aquatic life in the area.

Sharp-tail grouse and sage grouse have not been noted in the proposed pit area.

B. Vegetation

Vegetation studies conducted by Ecological Consulting Service distinguish five community types in the immediate area of proposed disturbance. Of these five community types, four are classified as shrub-grassland communities and the fifth as a timber-grassland community (figure 3).^{6/} The vegetative composition of these communities is markedly different, reflecting differing edaphic and microclimatic conditions as influenced by the local topography.

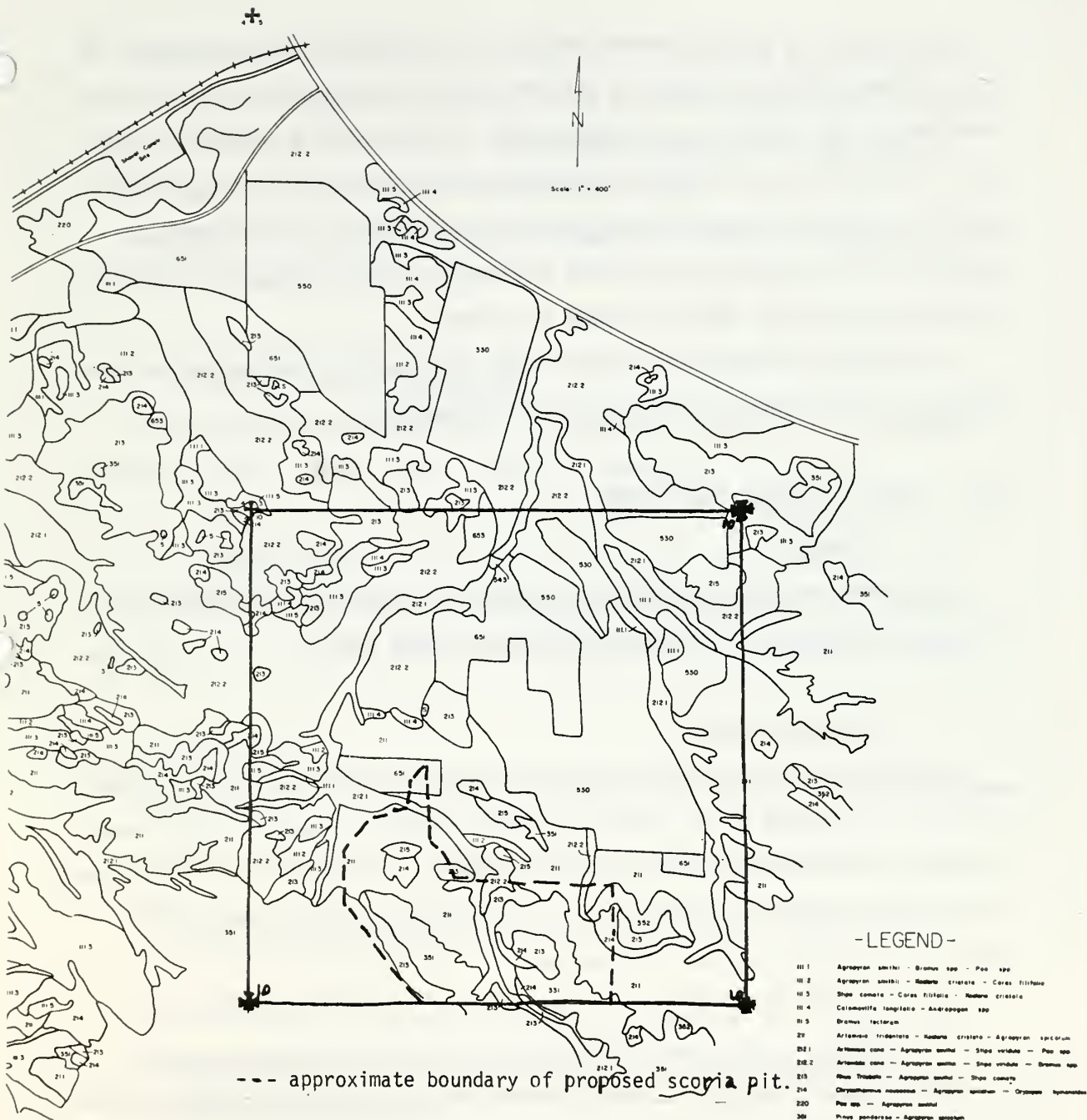


Figure 3

Vegetation Map

Section 10, T1N, R41E

Source: Dept. of State Lands
Final EIS on Western Energy
Co.'s Area B. July 26, 1976.

Mining activities will destroy the existing vegetation and alter edaphic and micro-climatic characteristics. Vegetation diversity patterns now present on the proposed pit area would not be reestablished. After seeding a vegetative cover would be established that would then undergo differential successional patterns as new micro-climatic and edaphic conditions are established. This vegetation, however, will be inconsistent with the surrounding natural vegetation at least in the short-run and may impose an impact of its own.

Seedlings, seed and where possible older individuals of adapted native trees, shrubs, forbs and grasses should be used in reclamation.

VIII. IMPACTS ON HUMAN ENVIRONMENT

A. Employment

Employment would not be affected in the Colstrip area by the proposed scoria pit because employees will be transferred from another area.

B. Social and cultural

Impacts on the social and cultural structures of the Colstrip area have been extensively discussed in the Final EIS prepared by the Department of State Lands on Western Energy Company's Rosebud Mine expansion into Area B. With no additional employment, there would be no increase in the stresses already placed on the social and cultural structures of the area.

C. Demands on environmental resources of land, air, water and energy

WECO's proposed scoria pit would disturb an area which would not be disturbed by coal mining. Five of the eight scoria pits under WECO's existing Open Cut Contract have not been opened (#2, 3, 4, 5, 6 - figure 2), because they are too

far from present mining activity.^{2/} Scoria Pit 7 is reported by WEC Co as being almost depleted although less than half of its permitted area has been disturbed. Mining Area A's scoria pit could be increased by amending either the Surface Mining Permit it is covered by or the Open Cut Contract.

Discussion of the demands on the environmental resources of land are found in the letters in the Appendix.

D. Archaeological and historical

There are no known archaeological or historical sites within the proposed mine area. (Dee C. Taylor, letter, 12/6/76 - Appendix).

E. Transportation

WEC Co's proposed scoria Pit 9 would require the construction of a new haul road from the mine site to Area B. Other sites have existing haul road systems.

IX. REFERENCES CITED

- 1) Western Energy Co., Application for Amendment to Contract No. 00232, September 18, 1976.
- 2) Michael R. Grende, Permit Supervisor, WEC Co., letter of October 13, 1976.
- 3) Montana Department of State Lands, Final Environmental Impact Statement for the Proposed Expansion of Western Energy Company's Rosebud Mine into Area B, July 26, 1976.
- 4) United State Department of Commerce, National Oceanic and Atmospheric Administration, Climatological summary for Colstrip, MT. 1941 - 1970.
- 5) Ecological Consulting Service Division, Econ Inc.; The Montana Power Company Colstrip 10 x 20 area Wildlife and Wildlife Habitat Annual Monitoring Report 1975.
- 6) Ecological Consulting Service Division, Econ Inc.; Western Energy Vegetation Production, Condition to Community Typing - Mining Areas A, B, and E; September 30, 1975.

X. DEPARTMENT OF STATE LANDS PERSONNEL INVOLVED IN WRITING THIS P.E.R.

Brace Hayden, Environmental Coordinator

Craig Howard, Environmental Planner

Joe Murphy, Chief, Open Cut Division

JoAnn E. Vorozilchak, Assistant Environmental Coordinator

The assistance of Linda Wareham, typist, is gratefully acknowledged.

APPENDIX



DEPARTMENT OF STATE LANDS

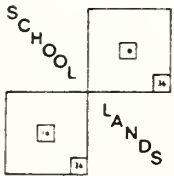
STATE CAPITOL

HELENA 59601

(406) 449-2074

STATE BOARD OF
LAND COMMISSIONERS
THOMAS L. JUDGE
GOVERNOR
DOLORES COLBURG
SUPT OF PUBLIC INSTRUCTION
FRANK MURRAY
SECRETARY OF STATE
ROBERT L. WOODAHL
ATTORNEY GENERAL
E. V. "SONNY" OMHOLT
AUDITOR

TED SCHWINDEN
COMMISSIONER



October 5, 1976

Mr. Michael R. Grende
Permit Supervisor
Western Energy Co.
40 East Broadway
Butte, MT 59701

Dear Mr. Grende:

Acting Commissioner Berry, Joe Murphy and myself met last Friday to discuss your recent submittal of an amendment to WECO's Open Cut Contract No. 00232. In accordance with the Montana Environmental Policy Act, it was decided that a Preliminary Environmental Review (PER) would be prepared to determine whether the action might significantly affect the quality of the human environment and therefore require a draft environmental impact statement.

In order to help me in preparing the PER, I am requesting some additional information which for the sake of clarity I will list.

1) WECO states in their application that ***"minerals (scoria) are owned by the Burlington Northern Inc. Western Energy has the right to mine the area under T and M Lease No. 8124A". In WECO's Surface Mining Permit Application for Area B you stated that mineral ownership in Section 10 was Federal. Does the U.S. Government only retain mineral rights in Section 10 to coal and other select minerals not including scoria? Please explain.

2) Joe Murphy has platted 8 permitted scoria pits on a map of the Colstrip area. Apparently, 5 of these pits have never been disturbed. In addition, WECO has a scoria pit permitted in Area A under a Surface Mining Permit.

In light of the abundance of sites available to WECO for obtaining road surfacing material, why does the company wish to disturb a new, unpermitted area? Would you specify the hazards or additional operating costs of obtaining scoria for the Area B pit from the other sites. Also would you estimate the volume of scoria presently available to WECO in permitted sites and estimate how long, given WECO's projected demand for scoria, such sites will be sufficient to meet such a demand (economic costs aside).

A
RESOURCE

FOR THE
PRESENT

AN

OPPORTUNITY

FOR THE
FUTURE

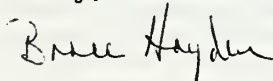
3) Does WECO intend to mine scoria in all their permitted Colstrip pit sites? If not, should WECO not request bond release on those sites for which they no longer see a use?

4) Would you specify as to why WECO did not include the proposed Area B scoria pit in their application for a Surface Mining Permit in Area B. It would have been little extra trouble for DSL to analyze the impacts from such a site in the recently completed Area B EIS and certainly would not have added more time to the EIS process. This Department has come under considerable criticism for practicing "incremental decision making". The timing of WECO's subject scoria pit application exemplifies the causes of such criticism. In light of this fact, would you briefly address the subject of Rosebud Mine planning so that DSL can more fully discuss the subject of "cumulative impacts" in our PER.

Many thanks for sending the reduced reproducible of Area E. I anticipate mailing the Area E PER within a week to 10 days.

If possible could you also submit a reduced reproducible of Area B showing both the proposed Scoria Pit and the recently permitted Area B amendment to the Rosebud Mine. This would be a valuable illustration in the Department's PER.

Sincerely,



Brace Hayden
Environmental Coordinator
Department of State Lands

cc: Leo Berry, Jr.
C.C. McCall
Joe Murphy

BH/llw



WESTERN ENERGY COMPANY

GENERAL OFFICES: 40 EAST BROADWAY, BUTTE, MONTANA 59701.

October 13, 1976

Mr. Brace Hayden,
Environmental Coordinator
Department of State Lands
Capitol Station
Helena, MT 59601

Dear Brace:

RE: Amendment to Contract 00232

Thank you for your letter of October 5, 1976. In response to your inquiries, I submit the following:

1. With reference to the mineral ownership in Section 10, T1N, R41E, your assessment is basically correct. When the U. S. Government transferred the ownership of Section 10, they kept the rights to the "coal, canals, and ditches." Therefore, the ownership of the scoria and other minerals were included with the surface ownership. Attached are two copies of the Montana Plat Map for the subject areas.

2. You are correct in that Western Energy Company has eight separate scoria sites. These sites are spread out across a nine mile area in order to provide an accessible supply of scoria for any necessary road construction. The sites chosen at the time of permitting consisted of all known scoria deposits in the general area where coal was being mined in Areas A, B, and E. At the time we anticipated that these sites would cover our scoria needs until we got into Areas C and D. Also at that time Western Energy did not realize that substantial amounts of scoria existed in the very south end of Area B. Five of the sites have not been disturbed because the coal mining has not advanced into areas close enough to warrant the use of these sites. Haulage costs, based upon distance, is the major consideration in determining just when the sites will be used. It is true that Western Energy has some scoria in Area A; but there are three reasons that make this site less attractive than the applied for site:

Mr. Brace Hayden
Page 2
October 13, 1976

a. The scoria deposit that was permitted along with the surface mining permit in A is almost depleted and to count on this site for all of the scoria that is needed in Area B, we would have to amend either SMP No. 74003-A002 or Contract No. 00232 to include additional area to the east.

b. We would have to open up a new road across the regraded portion of Area A which is scheduled for final seeding this fall. This activity would further delay the planned reclamation for portions of Area A.

c. The distance from the scoria site in Area A to Area B is approximately one mile further than the applied for site. It is impossible to determine the exact difference because of the distribution pattern created by the road network in Area B where the scoria is to be placed. It is estimated that approximately 100,000 cubic yards will be needed to construct the road initially. Using caterpillar 631C scrapers which have 18 cubic yards of capacity, it would take at least 5,500 loads for the road construction plus however many loads that will be needed for maintenance after the road is completed. This material would also have to be moved across the creek crossing which was a major consideration of the Land Department in the issuance of the Area B permit. The cost of hauling the scoria the additional mile would be approximately \$40,000 based upon 40¢/yd/mile. Some of the scoria is being hauled at this time from Pit No. 7. This site is somewhat closer than the Area A site; but the material is almost depleted and it has to be hauled across the highway and the creek.

It is impossible to estimate the yards of scoria that exist in the various permitted sites without drilling to find the boundaries. The demand from all of the sites will be based upon future road construction and maintenance needs. Necessary maintenance is related to the weather conditions, so again, we are dealing with speculation. Western Energy will need scoria for as long as we mine coal which may be fifty years.

3. We do, at this time, anticipate using all of the permitted sites.

Mr. Brace Hayden
Page 3
October 13, 1976

4. In response to your concern about not including the site with the Area B Application, I also regret that it was not included. This was an oversight on our part in that we did not find the material and realize its value to us at the time the Area B permit was being assembled.

A reduced reproducible of the Area B Map, showing the proposed scoria pit is submitted herewith.

If you have any further questions on this matter, please do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script, reading "Michael R. Grende".

Michael R. Grende
Permit Supervisor

MRG/cay/C:3

cc: Martin White



Anthropology

University of Montana
Missoula, Montana 59801
(406) 243-0211

off

December 6, 1976

Ms. Karlee Scow, Administrative Aide
Reclamation Division
Department of State Lands
Helena, Montana 59601

Re: Amendment to Contract No. 00232, Western Energy Company Lands,
Rosebud County, Montana.

Dear Ms. Scow:

The proposed amendment would permit activities that will disturb land surfaces in the SE $\frac{1}{4}$, Section 10, T1N, R41E. The contractor says, "The subject area has been examined for archaeological values" (p. 2). In his report, 1971 Archaeological Survey, Western Energy Company Lands, Rosebud County, Montana, Fredlund (1972, p. 1-2) states that this specific was surveyed.

I had to do a little digging into other sources, since Fredlund did not give the locations for sites 24RB1014, 24RB1015, and 24RB1022, to determine the fact that there are no sites reported to be within Section 10. Although Fredlund did not explicitly state that he did so, apparently he has included historical sites, e.g., 24RB1014, within his inventory.

If we assume that the survey was adequate and was competently done, then I see no reason why the amendment should not be approved. I am also assuming that the original contract contains a provision that would protect any buried or unsuspected cultural resources that might be encountered during operations.

The archaeological survey done by the Fredlunds in 1973 for Western Energy Company deals with lands other than those included in the proposed amendment.

Thank you.

Yours very truly,

Dee C. Taylor

Dee C. Taylor
Professor, Anthropology

tr

